



- Supports tens of thousands of devices with voltage down to 1.5V (Vdd) including EPROM, EEPROM, Flash EPROM, Microcontrollers, PLD, CPLD, FPGA and antifuse FPGAs
- Proven 6th Generation Technology
- Compatible with FX, standard manual and automated socket modules
- Uses USB 2.0 communication
- Patented solution to guard against passing blank parts - available only from BPM Microsystems
- Supports all device packages, including but not limited to, DIP, SDIP, PLCC, TSOP, SSOP, PCMCIA, QFN, MLF, LAP, SOIC, LCC, QFP, PQFP, PGA, SIMM, CSP, BGA, μ BGA, TQFP and TSSOP
- Ideal for design engineering and low-volume production
- Jobmaster™ files portable to BPM Production programmers
- Optional Lever Socket Actuator with Universal Pressure Plate

Programming Redefined

The 1610 manual device programmer is manufactured with design engineers in mind. This single-site universal programmer offers the versatility to support all device technologies in a variety of package styles with the use of standard manual or automated socket modules or high-speed FX™ socket modules.

The 1610 comes standard with 240 pin drivers for complete continuity and functionality testing on all pins, unlike other competitive programmers. Also included with the 1610 are weekly software updates with access to the latest algorithms at no additional cost for the lifetime of the programmer.



BPM MICROSYSTEMS

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GENERAL

Power: 90-260VAC, 47-63 Hz., .12 KVA, IEC inlet connector for worldwide use

Dimensions: 11.75" (298mm) x 8.65" (220mm) x 4.68" (119mm)

Weight: 7.22 lbs. (3.28 kg)

SOFTWARE

Required: BPWin

File Type: including, but not limited to, binary, Intel, JEDEC, Motorola, POF, RAM, straight hex, Tekhex, Extended Tekhex, ASCII hex, Formatted Binary (.DIO), AFM, OMF, LOF, STAPL

Device Commands: blank, checksum, compare, program, test, verify, erase, secure

Features: JobMaster™, data editor, revision history, session logging, device and algorithm information

HARDWARE

Calibration: Annual, may be verified on-site with optional socket module

Diagnostics: pin continuity test, ROM, CPU, pin drivers, power supply, communications, cable, calibration verification timing, ADC, DAC

PC System Requirements: Microsoft Windows XP/7

Operational Temperature: 41° to 104° F (5° to 40°C)

PIN DRIVERS

Quantity: 240-pins standard

Analog Slew rate: 0.3 to 25V/μs

Vpp Range: 0-25V

Ipp Range: 0-70mA continuous, 250mA peak

Vcc Range: 0-12V

Icc Range: 0-1A

Very low voltage: to 1.5V (Vdd)

Rise Time: 800ps

Overshoot: none

Clocks: continuously variable 1 MHz to 30 MHz

Independence: pin drivers and waveform generators are fully independent

STANDARD ACCESSORIES

Included: software on CD-ROM
user manual on CD-ROM
power cable
data cable
1-year hardware warranty

FEATURES

File Loading: automatic file type identification; supports Intel, JEDEC, Motorola S-record, POF, straight hex, hex-space, Tekhex and other file formats

Device Selection: intelligent device selector allows you to type as little or as much of the part number as you like then choose from a list of devices matching your description

Devices Supported: including, but not limited to, Antifuse, PROM, EPROM, EEPROM, Flash EPROM, Microcontrollers, SPLD, CPLD, FPGA

Continuity Test: each pin, including Vcc, ground, and signal pins, may be tested before every programming operation

Protection: overcurrent shutdown; power failure shutdown; ESD protection; banana jack for ESD wrist straps

Options: available Socket Modules including, but not limited to, Universal PLCC, standard PLCC, PGA, CSP, μBGA, SOIC, QFP, TSOP, LCC, SDIP, PCMCIA, QFN, MLF, LAP, receptacle socket options, Advanced Feature Software, simple and complex serialization

Programming Yield: assured by independent universal pin drivers on each socket, short distance from pin drivers to device, and accuracy of waveforms

Algorithms: all algorithms meet manufacturer approved specifications. BPM Microsystems has an excellent record of being first to provide certified algorithms for new devices

Software Updates: Weekly updates with access to the latest algorithms are available throughout the year at no cost



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